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EXAMINER

KITOV, ZEEV

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/085,138

Applicant(s)

LISCINKSY, STEPHEN

Examiner

Zeev Kitov

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2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1. Examiner acknowledges a submission of the amendment and arguments filed on June 09, 2003. Claims 1 and 12 are amended. New Claims 17 and 18 are added. Applicant's amendment necessitated the new ground of rejection presented in this Office action. The rejection follows. Presented arguments have been fully considered, but they are moot in a view of a new ground of rejection.

### ***2. Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a). Claims 1, 4 - 6, 11, 12, 14 - 18 are rejected under 35 U.S.C. 103(a) being unpatentable over Holmquest in a view of Tran et al. (US 5,224,0100).

Regarding Claim 1, Holmquest discloses most of the elements of the claim including a first, second and third sensing circuits (elements 12, 13 and 14 in Fig. 2a) for detecting a voltage levels for particular phases of the AC power signal and comparing the voltage levels of the phases to a threshold value (col. 2, lines 68 – 72); it further discloses a delay circuit delaying a result of operation of the sensing circuits for a

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predetermined time (element 22 in Fig. 2b, col. 4, lines 7 – 13) and an activation circuit indicative of whether the predetermined period of time has elapsed and the voltage levels have met the threshold value (element 107 in Fig. 2b, col. 4, lines 13 – 22).

However, even though his delay circuit can act at the time of power-up, it is not explicitly disclosed. Tran et al. discloses a power supply supervisor with independent power-up delays (shown in Fig. 2 and 3a, col. 6, line 63 through col. 8, line 7), which delays enabling shutdown operations until establishment of adequate voltages on the power supply bus thus allowing for a power supply to stabilize and ignoring faults for a brief period of time. His power-up delay is independent and does not delay normal shutdown operations of the system. Both patents have the same problem solving area, namely providing three-phase power supervision and protection. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Holmquest solution by introducing the independent delay circuit of Tran et al., because as Tran et al. states (col. 1, lines 20 – 32), to avoid false shut downs, the fault conditions should be reliably distinguished from the power-up state.

As per Claim 12, the claimed method is inherent in the structure disclosed in Claim 1 and rejected accordingly.

Regarding Claim 4, Holmquest discloses the supervisory system, wherein the indication signal represents a first negative indication that the input AC does not meet the threshold value.

Regarding Claims 5 and 14, Tran et al. discloses the supervisory system, wherein the predetermined period of time provides for stabilization of capacitors

(elements Csd and Coc in Fig. 2) in the circuit upon initially powering the circuit. The delay element capacitor (element Cpg in Fig. 3a) asserts its normal stable value after initial transient process associated with powering up the circuit. Both patents have the same problem solving area, namely providing three-phase power supervision and protection. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Holmquest solution by introducing the independent delay circuit of Tran et al., because as Tran et al. states (col. 1, lines 20 – 32), to avoid false shut downs, the fault conditions should be reliably distinguished from the power-up state.

Regarding Claim 6, Holmquest discloses the supervisory system, wherein in response to receiving the first and second positive indications, i.e. the input AC signal meets the threshold value and the predetermined time period elapsed the activation circuit outputs the AC power signal. When no error signal occurs on the error bus (element 21 in Fig. 2a and 2b) the transistors (elements 106 and 107 in Fig. 2b) remain in saturation, the activation element (element 23 in Fig. 2b) remains reenergized and AC signal remains being supplied as before.

Regarding Claims 7 and 16, Holmquest discloses the supervisory system, wherein each of the sensing circuits has to detect a proper voltage level in a respective phase before a positive indication is provided to the activation circuit. According to him, a positive indication (lack of signal on bus 21 in Fig. 2a and 2b) is provided only when none of three sensing circuits (elements 12 – 14 in Fig. 2a) sends an error signal to the bus (col. 4, lines 7 – 22).

Regarding Claim 11, Holmquest discloses the supervisory system reacting to the fault condition, such as a low phase voltage level (elements 12 – 14 in Fig. 2a, col. 2, lines 68 – 72).

Regarding Claim 17, Holmquest discloses a monitoring system capable of detecting open circuit in any of the three phases (phases A, B, and C in Fig. 1). Eventually it will give the failure indication, when more than one phase is open, as well. It is because the open circuit condition is an extreme case of undervoltage conditions, which are detectable by the circuit.

As per Claim 18, the claimed method is inherent in the structure disclosed in Claim 17 rejected accordingly.

b) Claims 8 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmquest in a view of Tran et al. and further in a view of Earle (US 5,642,052). As was stated above, Holmquest and Tran et al. disclose all the elements of Claim 1. They further disclose an element of Claim 8, namely a contactor coil connected to the activation circuit (element 25 in Fig. 1 and 23 in Fig. 2b). However they do not disclose a plurality of ground fault interrupter receptacles.

Earle discloses the ground fault interrupter receptacles (see Fig. 1 and col. 1, lines 65 – 67, col. 4, lines 1 - 2). It further discloses a voltage measurement circuit for a GFCI (element 106 in Fig. 5b, col. 8, lines 27 – 50). Both patents have the same problem solving area, namely providing efficient protection for AC fed equipment. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to have used combination of the GFCI circuits together with the Holmquest polyphase electric supply protection system, because as Earle states (col. 2, lines 3 – 21), use of GFCI necessitates a voltage testing to ensure a proper values of the voltage in an AC receptacle.

Regarding Claim 9, in the Holmquest polyphase electric supply protection system combined with the GFCI the GFCI receptacles are being protected via Holmquest supply protection system.

Regarding Claim 10, Earle disclose use of its circuit as a tester for allowing testing of AC power signals (col. 2, lines 14 – 21).

c) Claims 2, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmquest in a view of Tran et al. and further in a view of Court Decision *In re Aller*, 105 USPQ 233.

As was stated above, Holmquest and Tran et al. disclose all the elements of Claims 1 and 12. However, regarding Claims 2 and 13, they do not disclose a predetermined time period between one and two seconds. As was stated above, Holmquest discloses a time delay, but does not specify a particular value. The Court Decision states that discovering the optimum or workable ranges involves only routine skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected time delay of one to two seconds, because as the cited Court Decision states, where the general conditions of a claim are



disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

d) Claims 3, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmquest in a view of Tran et al. and further in a view of Court Decision *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As was stated above, Holmquest and Tran et al. disclose all the elements of Claims 1 and 12. However, regarding Claims 3 and 15, they do not disclose a threshold value of 12 volts. As well known in the art, most of designers to measure/compare the AC line voltage use to scale it down to low voltage value, because processing of low voltage values is easier and cheaper. Accordingly, Holmquest scales the phase voltages down and compares them to the zener diodes threshold (elements 42 – 44 in Fig. 2a, col. 2, lines 67 – 73). As to selection of particular value of 12 volts, the Court Decision states that discovering an optimum value of a result effective variable involves only routine skill in the art. An optimum value in this case is a degree of scaling down the phase voltage. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected an optimum value of scaling don the phase voltage and set the 12 volts threshold, because as the cited Court Decision states, that discovering an optimum value of a result effective variable involves only routine in the art.



### ***3. Response to Arguments***

Presented arguments have been fully considered, but they are moot in a view of a new ground of rejection.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***5. Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose telephone number is (703) 305-0759. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by

telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone numbers for organization where this application or proceedings is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Z.K.  
07/22/2003



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